

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
2 December 2004 (02.12.2004)

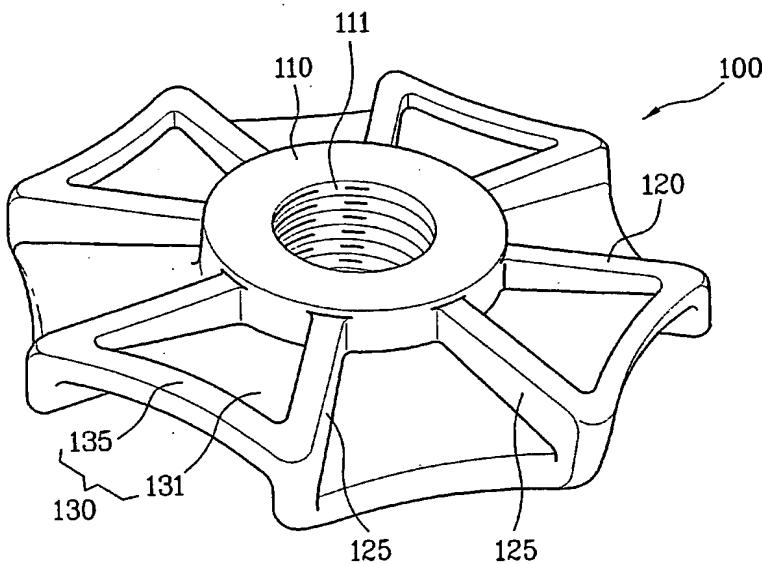
PCT

(10) International Publication Number
WO 2004/104471 A1

- (51) International Patent Classification⁷: F16M 7/00 (KR). GONG, Sung Rak [KR/KR]; Jeonpo 3-dong 24/4 330-733, Busanjin-gu, Busan 613-863 (KR).
- (21) International Application Number: PCT/KR2004/001180 (74) Agents: BAHNG, Hae Cheol et al.; KIMS INTERNATIONAL PATENT & LAW OFFICE, 15th Floor Yo Sam Building, 648-23, Yeoksam-dong, Gangnam-gu, Seoul 135-080 (KR).
- (22) International Filing Date: 19 May 2004 (19.05.2004)
- (25) Filing Language: Korean
- (26) Publication Language: English (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (30) Priority Data:
10-2003-0031956 20 May 2003 (20.05.2003) KR
10-2003-0031957 20 May 2003 (20.05.2003) KR
10-2003-0031954 20 May 2003 (20.05.2003) KR
- (71) Applicant (for all designated States except US): LG ELECTRONICS INC. [KR/KR]; 20, Yido-dong, Youngdungpo-gu, Seoul 150-721 (KR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CHOI, Kang Mo [KR/KR]; Hyundai APT. 106-1301, Naeseo-eup, Hoewon-gu, Masan-si, Gyeongsangnam-do 630-762 (KR). KWON, Dae Hee [KR/KR]; Samchang APT. 915, Chunghak 2- dong, 48, 21/4, Yeongdo-gu, Busan 606-750
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: LOCK NUT AND WRENCH FOR LEG ASSEMBLY OF HOME APPLIANCE



(57) Abstract: Disclosed are lock nuts (100) and (100a) for preventing a leg bolt (4) from loosening from a leg assembly supporting electric home appliances, and a wrench (500) for loosening or tightening the lock nuts (100) and (100a). The lock nuts (100) and (100a) includes a hub having a screw hole (111), a plurality of ribs extended in a radius direction from a circumferential surface of the hub, and having sides (125) and (125a) over which the wrench (500) or a finger is hooked, and supplementary member (130) provided allowing the wrench or finger to access form the radius direction of the hub to the sides (125) and (125a), and coupling the ribs (120). The wrench (500) includes a long grip having at least one projection (550) and (560) on an outer circumferential surface thereof, and a box end (530) or an open end (520) provided at either of both ends thereof.

WO 2004/104471 A1